

## MALDI-TOF-MS detection of pigments in wines during maceration

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### Abstract

In this study, matrix-assisted laser desorption and ionization time-of-flight mass spectrometry (MALDI-TOF-MS) was used for qualitative analysis of anthocyanins and derived pigments in red Vranec wines (*Vitis vinifera* L.) [1, 2]. Wines were produced from whole and crushed berries, and samples were taken after maceration of 3, 5, 7, 9, 10, 12, 15, 18 and 20 days. Extraction of pigments was performed with Sep-PAK® Plus C18 cartridge columns. Sinapic acid was used as a matrix for analyses of the samples. Based on the targeted fragmentation of the ions of interest (their M<sup>+</sup> signals), the pigment peaks were identified under positive ion mode. Polyphenolic compounds were detected as flavonoids (anthocyanins and derived pigments, flavonols, flavanones, flavones, isoflavonoids), phenolic acids (hydroxycinnamic acids), lignans and stilbenes. Glucoside, acetylglucoside and *p*-coumarylglucoside derivatives of anthocyanins were confirmed to be present in the wines.

**Keywords:** Red wine, polyphenols, anthocyanins, pigments, MALDI-TOF-MS.

### References

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